



Bowhead Design Corporation

RX Adventure-E Bike



BOSCH





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Version 1.00



DISCLAIMER

Read this manual carefully as it contains important safety and maintenance information.



WARNING

Copyright 2023 Bowhead Design Corp. All information contained within this publication is based on the latest product information at the time of publication. Due to constant improvements in the design and quality of production components, some minor discrepancies may result between the actual Bike and the information presented in this publication. Depictions and/or procedures in this publication are intended for reference use only. Bowhead makes every effort to ensure the accuracy of its documentation and assumes no responsibility or liability if any errors or inaccuracies appear within. Any reprinting or reuse of the depictions and/or procedures contained within, whether whole or in part, is expressly prohibited. The original instructions for this Bike are in English.

OPERATING WITHOUT INSTRUCTION

Operating this bike without proper instruction increased the risk on an accident. The operator must understand how to operate the bike properly in different situations and on different types of terrain. All operators must read and understand the owner's manual and all warnings and instruction labels before operating the bike.

EQUIPMENT MODIFICATIONS

Your Bowhead RX is designed to provide safe operation when used as directed. Modifications to your bike may negatively impact stability and safety. Failure of critical machine components may result from operation with any modifications. This vehicle may become less stable at speeds higher than those for which it is designed. Loss of control may occur at higher speeds. Do not install any non-Bowhead approved accessories. Any modifications or installation of non-Bowhead-approved accessories could create a substantial safety hazard and increase the risk of bodily injury. The Bowhead limited warranty on your bike will be terminated if any non-Bowhead approved equipment and/or modifications have been added to the bike. Use only Bowhead-approved accessories & components and familiarize yourself with their function and effect on the RX.

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1 PREFACE

1.1 Welcome to Team Bowhead!

Thank you for purchasing your RX Adventure-E Bike from Bowhead!

We take pride in bringing you a quality product that will offer years of enjoyment. Although your RX comes pre-assembled in a crate, it has travelled a great distance to reach you and needs a bit of extra attention prior to riding. Please read and understand this manual fully before riding your RX and check out our “how to” videos on our YouTube channel (<https://www.youtube.com/channel/UCqZii12qtvKGZOnqSHkXGQg>)

For Instructions on unboxing your RX, see page 19.

Be sure to check all hardware for correct torque (see “Torque specifications for the Bowhead RX” on page 40). Before each ride, follow the recommendations in the “Pre-ride safety check” on page 37. And finally, take care of your new RX by following the guidelines in “How to identify and solve problems” on page 55. If you are not sure you have the skills, experience, and special tools required for assembly and maintenance, get help from a local, certified, and reputable bike mechanic, or contact Bowhead at service@bowheadcorp.com



1.2 Explanation of safety warnings



DANGER

Danger indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury



WARNING

Warning indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.



CAUTION

Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

Notice

NOTICE Indicates information considered important, but not hazard-related. May lead to material damage if ignored.

1.3 Retaining instructions

Read and understand this manual and its safety instructions before using this product. Failure to do so can result in serious injury or death.

Follow all the instructions. This will avoid fire, explosions, electric shocks or other hazards that may result in damage to property and/or severe or fatal injuries.

Keep all safety information and instructions for future reference and pass them on to subsequent users of the product.



1.4 Obtaining documentation and information

The latest version of the documentation is available at the following address:

<http://www.bowheadcorp.com>

Bowhead has created many resources and videos to help you learn about maintenance and riding tips, which can be found at <https://www.youtube.com/c/Bowhead/videos> We continue to add resources to our channels, so please subscribe in order to stay up to date on all product launches, maintenance videos, and how-to videos.

For further instructions on all OEM components (including Bosch, SRAM, Rohloff, Magura, RockShox and FOX), visit our website to access the complete manuals.

For service-related inquiries, please contact our service department at service@bowheadcorp.com

2 Description of the product

2.1 Purpose of the product

The Bowhead RX is designed to increase users' ability to access the outdoors and places that may have been previously out of reach by the user. The Bowhead RX integrates the Bowhead FLOW™ articulating front-end from our award-winning Bowhead Reach™ bike with the new single-pivot MX-style rear swingarm and suspension system for a nimble and agile ride. Traversing off-cambered and rough terrain is a breeze, and the RX provides endless opportunities for access and exploration whether you're hammering down a paved road, navigating a gravel track, flowing cross-country, or shredding single-track mountain trails. The RX features the Bosch Performance Line CX motor and electronics system that provides seamless torque-sensing assistance, amplifying the power of arms by up to 3.5 times, and the electronic shifting SRAM Eagle 12-speed drivetrain. The motor and batteries are mounted mid-bike, through a superbike MotoGP-style aluminum subframe, to create the ideal low center of gravity and roll. The RX is uniquely tuned to each rider's thirst-for-adventure profile to provide a truly custom experience.

2.2 Improper Use

Failure to adhere to the proper use poses a risk of personal injury and material damage. The Bowhead is not suitable for the following uses:

- When the electrical drive has been manipulated
- Riding with a damaged or incomplete Bowhead
- Riding through deep water
- Lending bike to untrained riders
- Riding under the influence of alcohol or drugs
- Riding with excessive baggage
- Carrying or towing other people
- Improper repair
- Improper servicing
- No riders under the age of 16 allowed

2.3 Technical data

Performance Line CX Motor

Parameter	Unit
Continuous power rating	350 W
Voltage	36 V DC
Max. torque	75 Nm
Operating temperature	-5 'C - +40 'C
Storage temperature	-10 'C - +50 'C

Table __ Performance Line CX Motor Technical Data

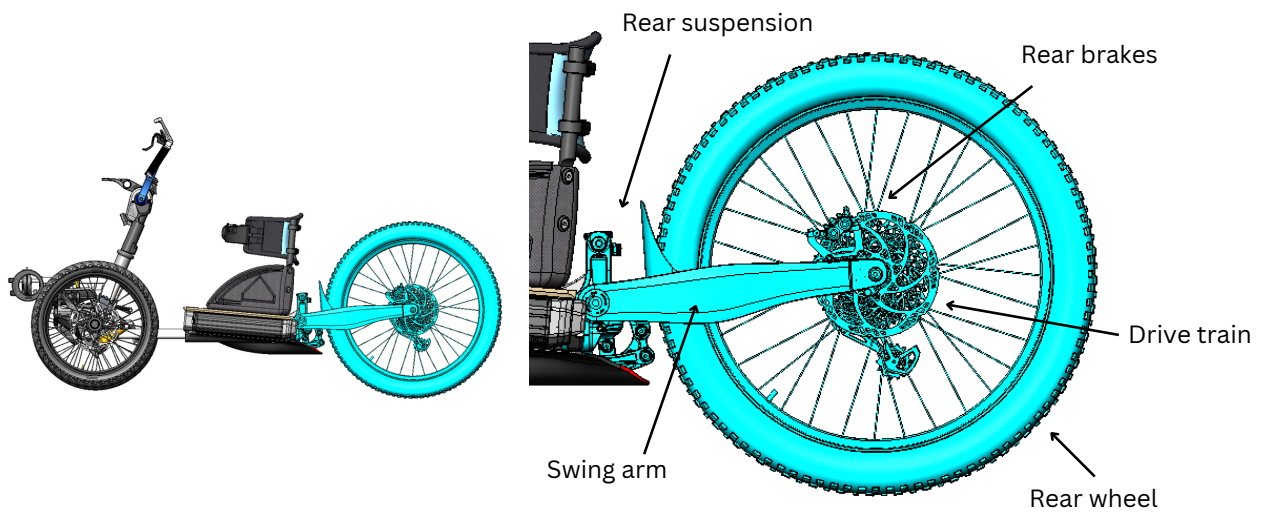
2.4 Product Compliance

The Bowhead RX and each OEM component complies the Machinery Directive and Low Voltage requirements. See last page in this user manual for Declaration of Conformity.

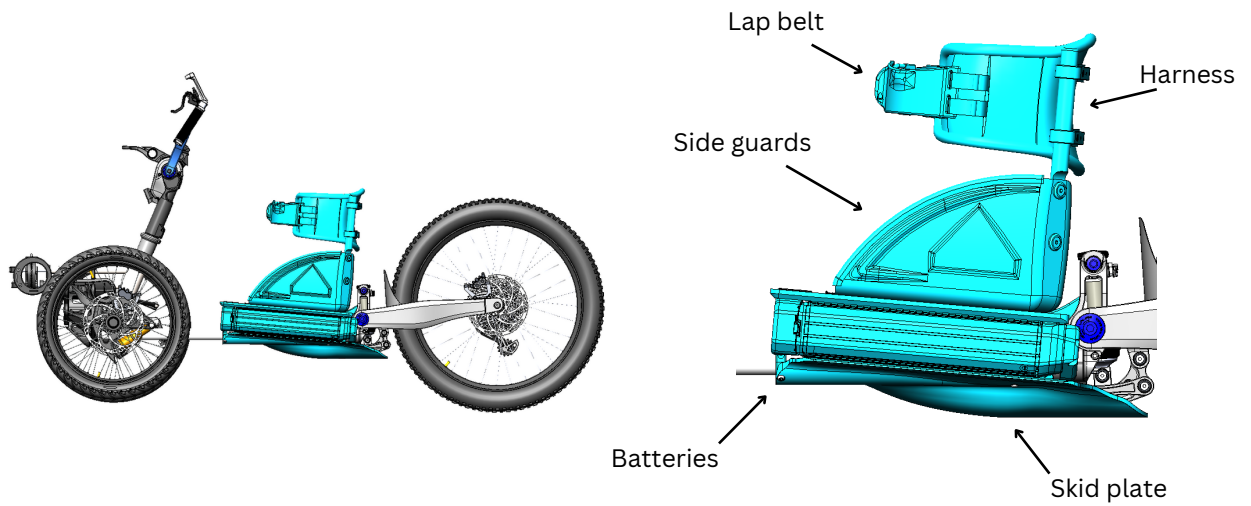
2.5 Get to know your Bowhead RX



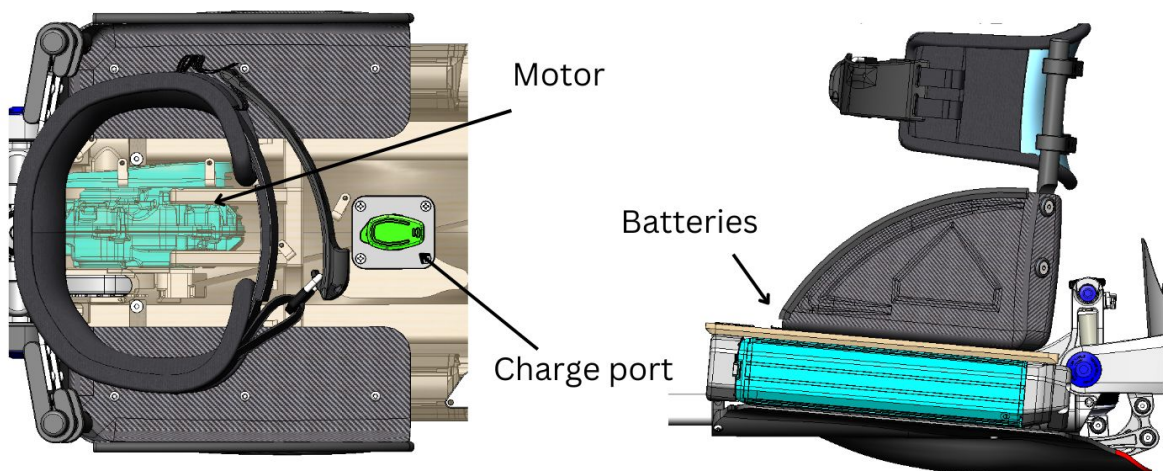
2.5.1 A. Rear end



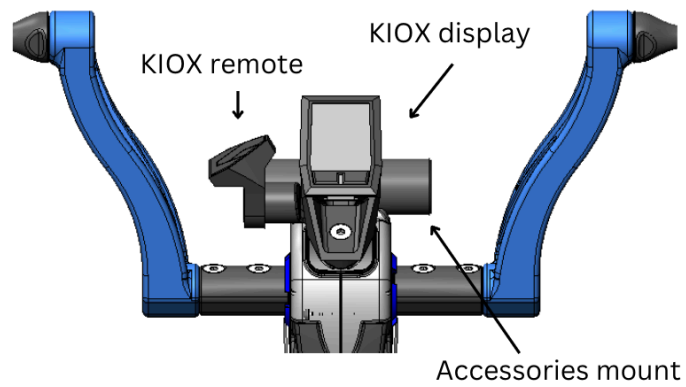
2.5.2 B. Seat assembly



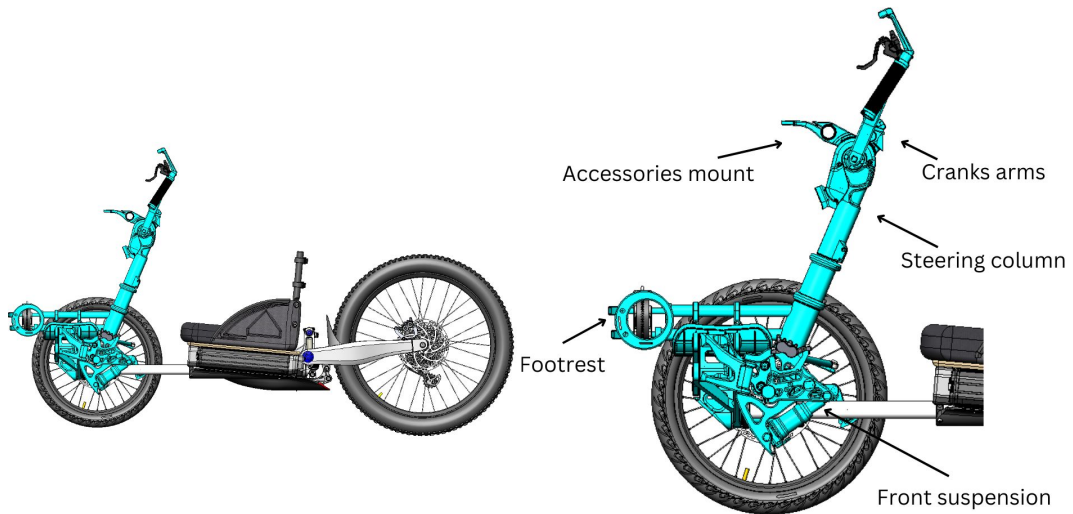
2.5.3 C. Bosch motor, batteries, and charge port



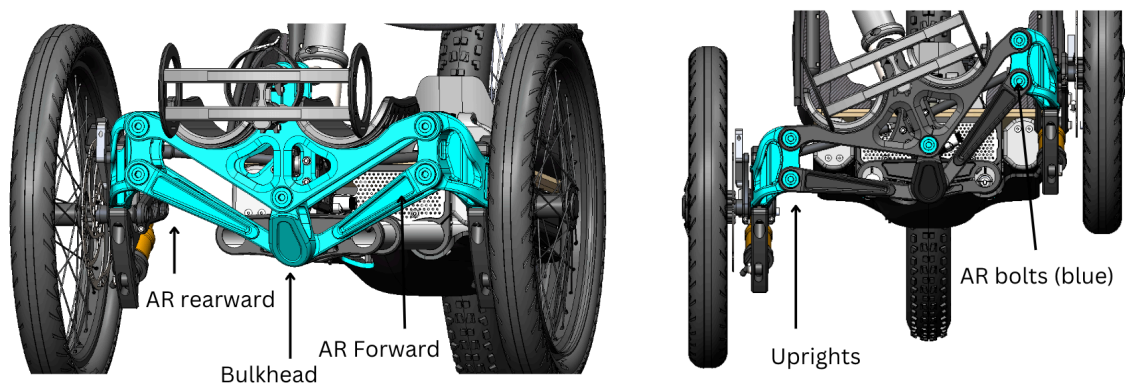
2.5.4 D. Cockpit



2.5.5 E. Front end



2.5.6 F. Articulation



3 Instructions / use

3.1 Electrical component instructions

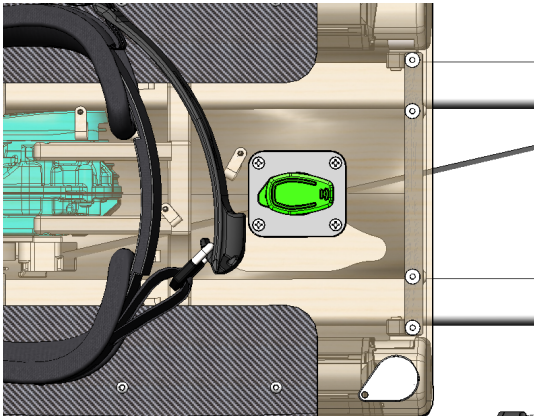
3.1.1 Charging the battery



To charge the battery individually, remove the battery from your RX and connect the charging cable to the batteries charging port. The battery level indicator shows the charge level during charging.

NOTE: If the battery is outside its charging temperature range, three LEDs will flash on the battery level indicator as shown below.

3.1.2 Charging the battery while installed on bike



- The Bowhead RX can accommodate up to two batteries, which can be charged simultaneously via the charge port located on the seat pan.
- When the drive system is switched on, the display screen shows the charging process.
- The two batteries are discharged alternately during use.

NOTE: If you are using one battery and one Bosch Dummy battery, always install the true battery on the left side of the bike.

3.1.3 Battery installation and removal

To install:



Left side plug



Right side plug

To insert and remove the batteries, you will need to locate the keyhole locations and remove the plugs as shown above.



Step 1.



Step 2.



Step 3.



Step 4.

Step 1: Carefully align the battery with the pins.

Step 2: Once the pins are properly contacting the battery, gently slot the battery into its location under the RX seat base.

Step 3: The keys are needed for both installation and removal. Turn the key and ensure you hear one “click”.

Step 4: Push the battery in and ensure you hear a second “click”.

Step 5: Remove the key from the keyhole and store in a safe place.

To remove:

Gently turn the key until the battery clicks out of its lock. Place a finger on the tab shown in Step 3 above and pull the battery out of its slot.

3.1.4 Waking the battery

The battery switches to sleep mode to protect itself when not used for a longer period. The LEDs on the operating status and battery level indicator do not light up.

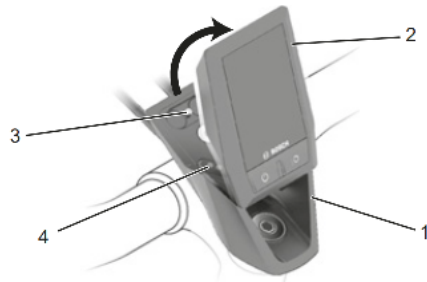
- Press the On-Off button (battery)
- The battery's operating status and battery level indicator shows the battery level.

3.1.5 Charging the KIOX

- The Bosch KIOX will drip charge while in the cradle.
- Occasionally, (esp. on a new bike) drip charging is insufficient for the KIOX display. In this case, the KIOX can be removed from the cradle and charged via USB cable.
- The KIOX will only charge in the cradle when it is turned on.

3.1.6 Removing the display

- Take hold of the display at its top end.
- Pull the display forwards away from the contacts to the drive unit until it has released from its magnetic mount.
- The system is switched off by removing the display.



Pull the display (2) out of its mount (1) away from the contacts with the display blocking screw (3).

3.1.7 Using the USB port

Notice

A USB connection is not a waterproof plug connection. Any moisture which enters through the USB port may trigger a short circuit in the display.

- Never connect an external device when cycling in the rain
- Always close the protective flap on the USB port when cycling in the rain.

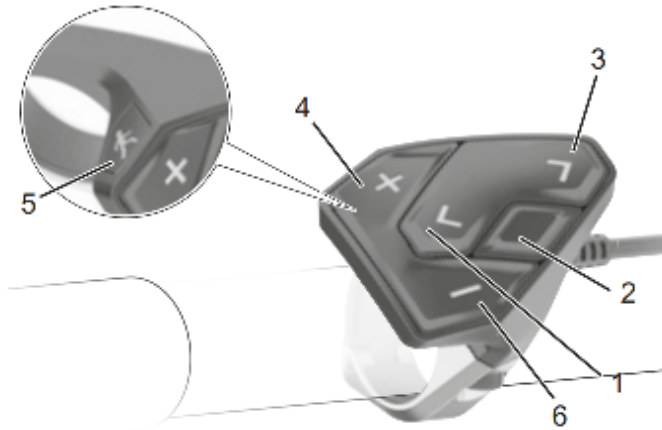
Regularly check the position of the rubber cover on the USB port and adjust as necessary.

3.1.8 Selecting level of assistance

You can adjust how strongly the electric drive should assist you on the control panel when pedaling.

3.1.9 Operating the display

The display is operated using five buttons on the control panel.



	Symbol	Designation
1	<	Browse back button
2		Select button
3	>	Browse forwards button
4	+	Plus button
5		Push assist button
6	-	Minus button

Table 1 Overview of the control panel

4 Preparation

4.1 Unboxing your Bowhead RX

4.1.1 Removal of the transport and packaging restraints

Your bike is here, and you are excited to ride! Follow the simple steps below to safely remove your bike from the crate it was shipped in.

Opening the crate:

1. Using a drill with the appropriate Robertson style drill bit, open the top of the crate to check the orientation of your bike.
2. Remove the side panel that is directly in front of the bike.
3. Remove 2pcs of wood blocking the wheels in place.
4. Slowly roll the bike out of the crate forwards.



WARNING

Do not roll the bike out backwards. This may cause the brake cables to get wrapped around the crank arms and lead to brake hose damage.

4.1.2 Unpacking the Bowhead RX

Now that you have successfully rolled your bike out of the crate, it is time to finish unpacking the bike, including all accessories and additional components.

1. Remove any additional components or parts from inside the crate.
2. Carefully cut or unwrap the SRAM & battery boxes from the seat area.
3. Remove all additional bubble, foam, or protective wrap from the bike and accessories.

Notice

If you are located outside of North America, your RX will be shipped without batteries and a charger. You will be responsible for purchasing the required Bosch batteries and charger from a reputable Bosch dealer in your area.

4.1.3 Packaging contents

Every bike that leaves the shop is packaged with extreme care and attention to detail. Please ensure all the items listed below are included with your Bowhead RX and contact Bowhead immediately if anything is missing.

Crate content list:



- A. KIOX Display
 - B. Derailleur setup tool
 - C. SRAM folding multi-tool
 - D. Battery keys
 - E. SRAM AXS shifter charger and storage blocks.
 - F. Bosch charger + cable (*North American customers only)
 - G. Bosch power tube 500 1pc or 2pcs (*North American customers only)
- Additional: Bowhead Hauler, Seat cushion, other accessories (*Only if ordered)
- If anything is missing, please contact Bowhead immediately.

4.1.4 Further unboxing notes:

1. Please ensure to open your RX's crate from the front of the bike so that you can roll the bike forward out of the crate. Do not roll backwards out of crate. If you must remove the bike backwards from the crate, please be sure to get some assistance if needed and lift the rear wheel while you pull the bike backwards out of the crate.
2. The Power Tubes (batteries) are shipped in their original boxes to ensure electrical connections aren't jeopardized causing a short during shipment. These boxes can be kept and used for travel or any repairs that may need to happen down the road.
3. The battery keys are shipped in the SRAM box. The battery key slots are plugged with 3D printed plugs, once you have removed those, installed your battery or batteries please be sure to re install the 3D printed plugs to help keep the key slots free from any dirt mud and corrosion.
4. If you are using one battery and one Dummy battery, please be sure to install the real battery on the left-hand side of the bike.
5. Your SRAM shifter battery charger is in the SRAM box as well. Be sure to refer to the SRAM PDF for charging and maintenance procedures.
6. We have adjusted your front and rear suspension based off of your body weight, but please don't hesitate to make any further adjustments based on your riding style.
7. The shifter is located on your right crank pedal just above your brake lever, we do recommend it stay in this location to avoid the potential for pinch points.

4.2 How to transport and store the product



Crash caused by unintentional activation

There is a risk of injury if the drive system is activated unintentionally. Remove the battery before your bike is transported.

4.2.1 Weight of Bowhead RX for transport

The total weight of the base model RX with two batteries is approximately 96lbs. This weight will fluctuate depending on accessories and upgrades. For example, the Titanium frame rails save approximately 6lbs. The weight of two Bosch 500 Power Tubes is 13lbs, so the RX will weigh approximately 82lbs if transporting without batteries.

4.2.2 Lifting, handling, and transporting the product

4.2.2.1 To lift the product safely

To lift the product safely:



1. Do not lift your RX from the accessories mount or other non-load bearing components. Flagging tape above exemplifies this.
2. The bike should not be lifted by one person without support.
3. Remove the batteries to decrease the weight prior to lifting.

4.2.2.2 To transport the product safely

To transport the product safely:

1. Ensure product is properly secured prior to transporting.
2. Use load bearing components, such as frame rails, to fasten bike securely.
3. Do not rely on the brakes for securing RX during transport. Engaging the brake lever firmly for extended periods of time can damage the brakes.
4. Remove the KIOX display, batteries, and accessories prior to transporting.
5. If transporting on the back of a vehicle, you must use a suitable bike rack or Bowhead approved system.

4.2.2.3 Shipping the battery

Shipping the battery

The battery is considered a hazardous good and only trained persons may pack and ship a battery. If you are planning a trip, you will need to plan and ship your batteries to your destination as you cannot fly with them.

4.2.2.4 Transporting the battery

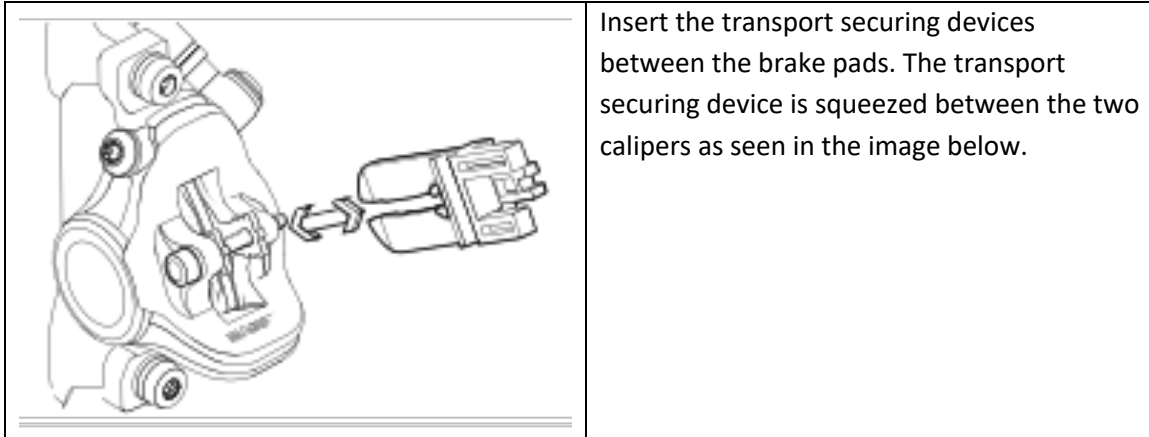
Transporting the battery

Batteries are subject to hazardous goods regulations. Undamaged batteries may be transported by private persons in road traffic.

Commercial transport requires compliance with regulations concerning packaging, labeling, and the transportation of hazardous goods. Open contacts must be covered, and the battery securely packaged.

4.2.2.5 Using the brake transport securing system

Using the brake transport securing system



4.2.3 Storing your Bowhead RX



Risk of fire and explosion due to high temperatures

Temperatures over 60°C can also cause liquid to leak from the battery and the battery will become damaged. Batteries may self-ignite and explode.

- Protect batteries against heat
- Never store in proximity to hot or flammable objects
- Never expose batteries to continuous direct sunlight and never store near heaters.

Please refer to the Bosch manuals found on our website for more information for storage of all electrical components.

Notice

The battery discharges when not in use. This can cause irreparable damage to the battery.

- The battery must be recharged every 6 months.

The battery may become damaged if it is permanently connected to a charger

- Never connect the battery to a charger permanently.

The KIOX display battery discharges when it is not in use. This can cause it to be irreparably damaged.

- Recharge the display battery for at least one hour every 3 months.

To store the product safely:

- The optimal storage temperature for batteries is 22°C – 26°C.

If your RX is to be removed from service for longer than four weeks, for the winter, for example, you need to prepare it for a break in operation.

4.2.4 Preparing a break in operation

1. Remove battery from your RX
2. Charge battery to around 30% - 60%
3. Your bike needs to be cleaned with a damp cloth and preserved with a wax spray. Never wax the brake pad and rotor surfaces.
4. For longer periods of your bike being out of service, it is recommended that you do a deep clean of your bike and ensure you follow the recommended battery maintenance guides.

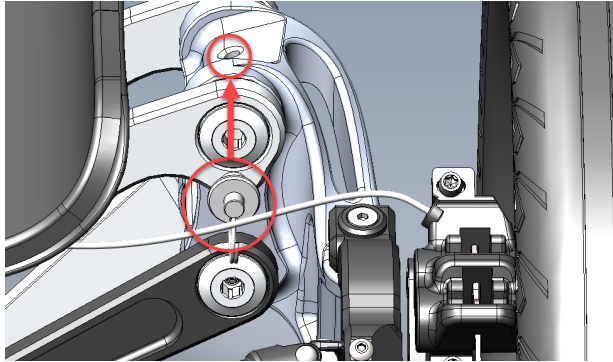
4.2.5 Taking out of operation

- Store your RX, battery, and charger in a dry, clean environment. We recommend storing them in uninhabited rooms with smoke alarms. Dry locations with an ambient temperature of about 20° C are ideal.
- Recharge the display for at least 1 hour every 3 months
- Check the battery level after 6 months. If only one LED on the battery level indicator lights up, recharge the battery to around 30% - 60%.

4.2.6 Conditions for assembling

The Bowhead RX comes fully assembled so you are only a few short steps from your very first ride!

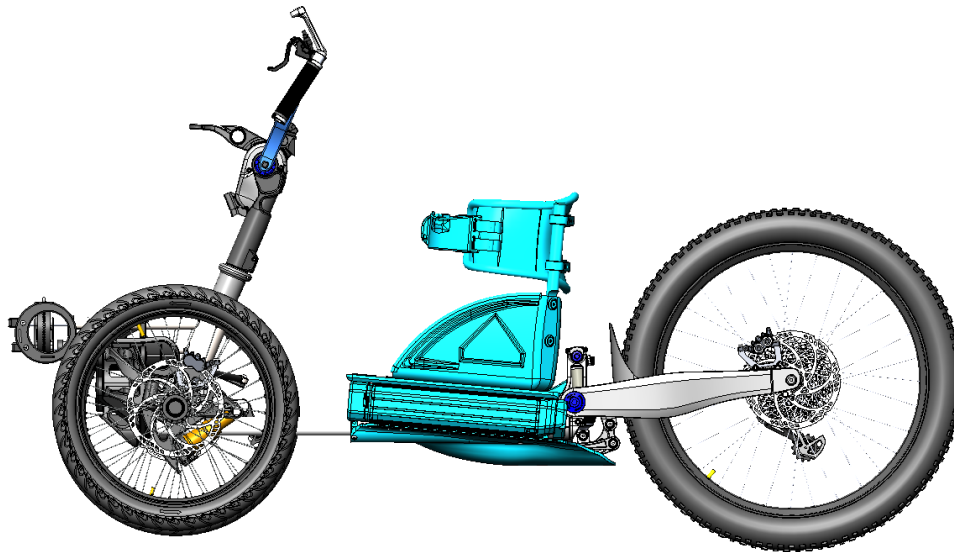
4.2.7 Using the articulation (AR) pin



The RX comes with a pin that is used to prevent the bike from articulating when the bike is not being ridden. The pin should be installed while the bike is in storage, being transported, or while the rider is transferring in and out of the bike. The pin should be removed while riding and stored in the insert shown above.

Note: If extra support is required while using the articulation, there are accessories, such as Lean Assists and Lean Limiters, that aid the rider and limit the amount the bike can articulate. These accessories can be ordered online. Please contact Bowhead if you have any questions.

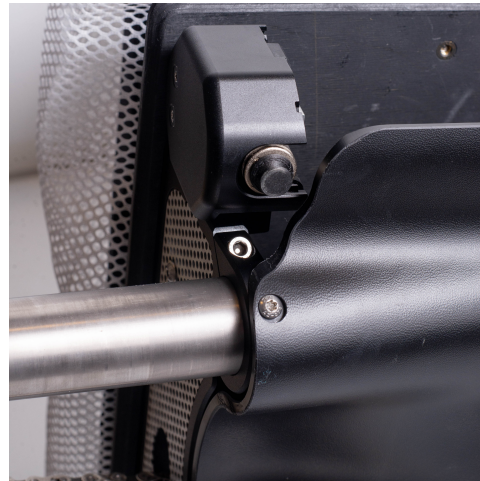
4.2.8 Adjusting the seat position



The seat of your RX can be adjusted forward and back. To do so, you need to loosen the 4 clamping bolts that secure the assembly to the frame rails as described below.



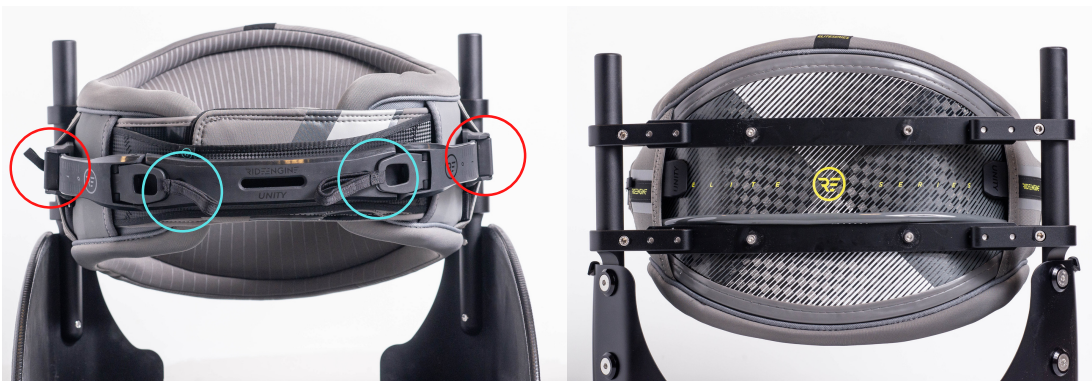
Rear bolt (right side)



Front bolt (right side)

1. Remove the batteries from both sides of the bike using the keys provided.
2. Loosen clamping bolts on both sides of the bike (shown in images above).
3. You may need to use a rubber mallet to gently tap the seat assembly forward or backward into the desired riding position.
4. Test the seating position and ensure you have achieved the optimal position. You should have a slight bend in your elbows throughout the crank rotation.
5. Once the riding position has been confirmed, tighten the bolts to 12Nm.
6. Reinstall batteries carefully, using the key supplied with you RX.

4.2.9 Adjusting the harness

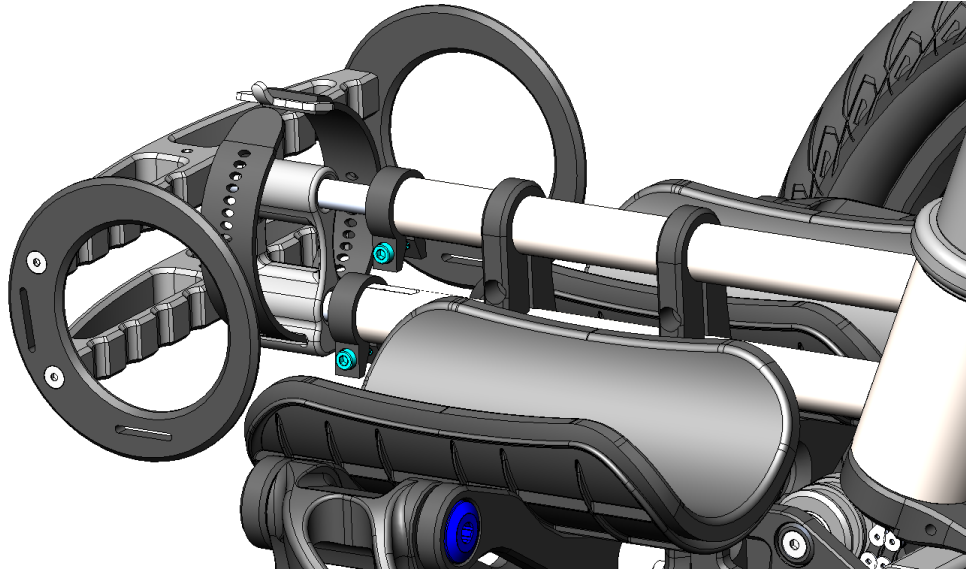


Each bike will come with the harness size specified by the customer. Each size has adjustability that allows the rider to customize their fit. To adjust the harness:

1. Transfer into the RX.

2. Test the current size and determine if it is too tight or too loose. The harness should be snug, with just enough room to slide a few fingers down one side.
3. Open the tabs on the left and right side (circled in red) and adjust evenly on both sides.
4. Lock the measurement in place when a comfortable size has been determined.
5. Secure the harness using the latch mechanism on either side of spreader bar (circled in blue).

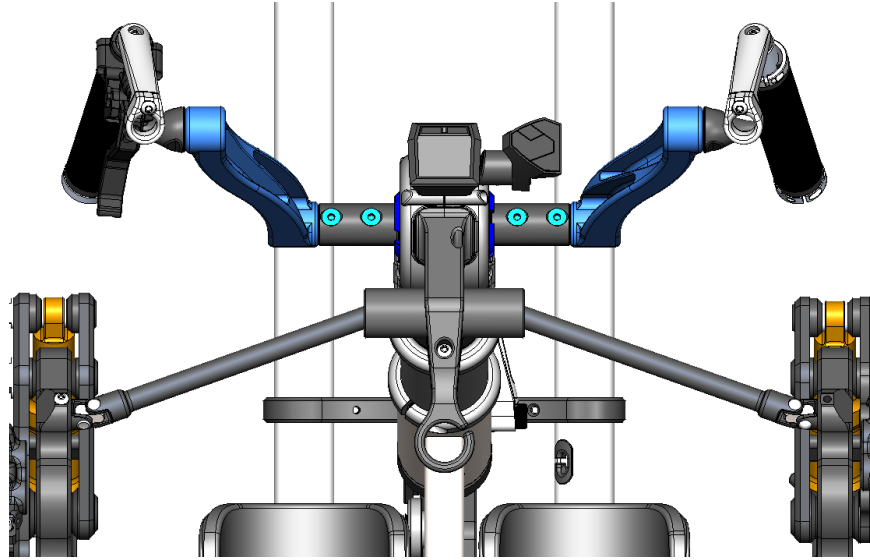
4.2.10 Adjusting the footrest



The footrest may be adjusted to accommodate different rider heights by sliding the assembly in or out of the steering tubes. To move the footrest:

1. Loosen the 2 screws on the left side of the bike frame using a 5mm Hex Key.
2. Move the footrest to your desired location.
3. Tighten the screws and torque to 10Nm.

4.2.11 Adjusting the crank width



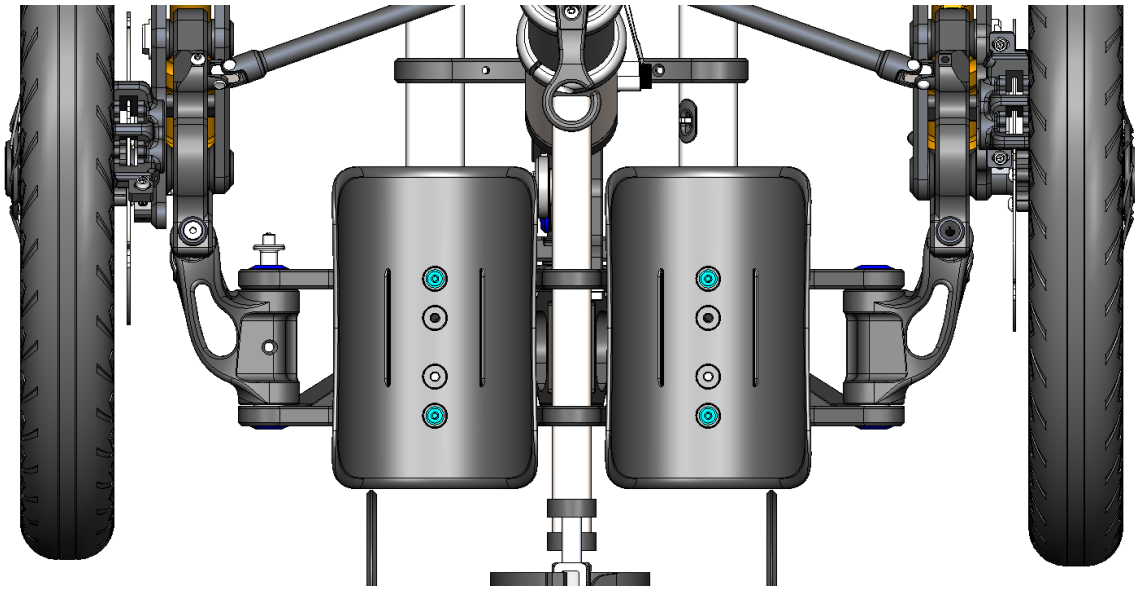
The crank arms can be moved outwards from the stem to widen the crank position. Both crank arms must be moved to adjust the width and ensure optimal riding positions are maintained.

There are 3 distinct width locations to adjust for rider comfort.

1. Ensure the AR locking pin is installed in your articulation.
2. Use a 4mm Hex Key to remove the 4 screws located on either side of the stem cap (highlighted in blue above).
3. Remove the crank arms.
4. Reinstall crank arms at desired width location.
5. Use blue Loctite and torque the 4 screws to 10Nm to secure.

4.2.12 Adjusting the calf rests

Your RX has two positions in which the calf rests can be installed. To adjust them, follow the steps below.



1. Gently remove the calf rest foam on both sides. This can be done by peeling the foam back in one corner, and ensuring the Velcro is separating properly.
2. Remove the bolts securing the calf rests in place, highlighted in blue above.
3. Turn the calf rests 180° to change their positioning.
4. Reinstall bolts and torque to 2.5 Nm.
5. Realign the calf rest foam and attach Velcro.

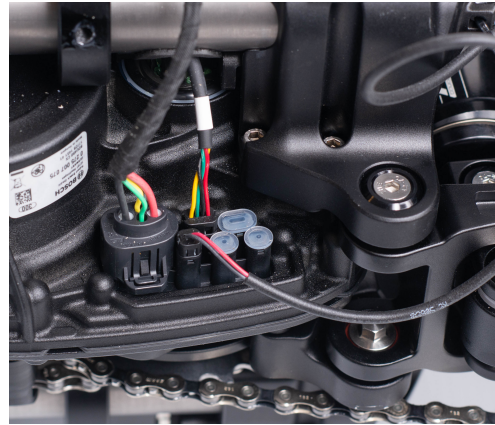
4.2.13 Seat modifications

The seat assembly on your Bowhead RX performs multiple functions and is a highly complex and sensitive module.

Overview of Functions:

1. Seating and overall connection to bike.
2. Electronic protection: protects batteries and motor.
3. Charging port.
4. Power connection to motor.

There are only 2 adjustments that can be made to the seat by non-skilled Bowhead technicians: **6.2.5 & 6.2.6** from the above information. However, the seat and harness assembly are critical to the operation of your bike and must fit perfectly. Please contact Bowhead if your seat assembly does not perform as expected and we will work with you to determine if additional modifications are practical. Do not attempt any modifications yourself as they may affect your warranty coverage. See wiring diagram below for reference purposes only.



4.2.14 Adjusting the brake lever



Brake failure due to incorrect setting

If the pressure point is set with brakes where the brake linings and brake disc have reached their wear limit, the brakes may fail and cause an accident with injury. Before you set the pressure point, ensure the brake linings, and brake disc have not reached their wear limit.

The pressure point setting is adjusted using the twist knob:

- Turn the twist knob towards the plus (+) symbol
- The *brake lever* moves closer to the handlebar grip. Re-adjust the grip distance as necessary.
- The lever pressure point activates sooner.



4.2.15 Commissioning



Risk of fire and explosion due to incorrect charger

Batteries which are recharged with an unsuitable charger may become damaged internally. This may result in fire or explosion.

- Only ever use the battery with the supplied charger. For international orders where chargers and batteries must be sourced locally, only use products recommended by Bowhead.
- Mark the charger clearly to prevent mix-ups – with the Bowhead Universal Bike Code (UBC) for example.

Only trained specialist staff and Bowhead builders may perform initial commissioning. Bowhead bikes will be delivered fully assembled, unless shipping to a trained technician who is capable of safe assembly.

4.2.16 Checking the battery



Risk of fire and explosion due to faulty battery

The safety electronics may fail if the battery is damaged or faulty. The residual voltage can cause a short circuit. The battery may self-ignite and explode.

- Never charge a faulty battery.

4.3 Installing the front and rear wheels

The front and rear wheels may need to be removed in order to perform maintenance and repairs or for transporting the bike.

NOTE: Front wheels do not need to be removed in order to repair flats and replace tires on the Bowhead RX. You can simply remove the tire and tube on the outer side of the rim.

4.3.1 Front wheel removal and installation

4.3.1.1 Front wheel removal



Axle bolt



Clamping bolts

1. Remove the axle bolt.
2. Loosen the 2 clamping bolts.
3. Slide the axle out and drop the wheel down. By removing the wheel downwards, the disc rotor will slide out of the caliper, which allows you to remove the wheel *without* removing the caliper.

4.3.1.2 Front wheel installation

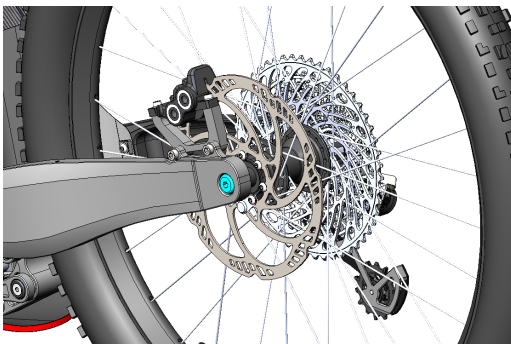
1. To install the wheel, you will repeat the removal process steps in reverse. Carefully insert the wheel and disc rotor back into place, ensuring the rotor inserts between the brake pads.
2. Insert the axle.
3. Tighten the axle bolt to 5Nm.
4. Tighten the two clamping bolts when the wheel is aligned and installed properly. These bolts should be torqued to 5Nm.

4.3.2 Rear wheel removal and installation

4.3.2.1 Rear wheel removal



1. To remove the rear wheel, we recommend shifting your RX into the highest gear (smallest cassette cog, furthest from bike) in order to get the derailleur and chain out of the way.
2. Lock out the derailleur by pushing it forward and pressing the lock button. This will relieve the chain tension and make it easier to drop out the wheel.

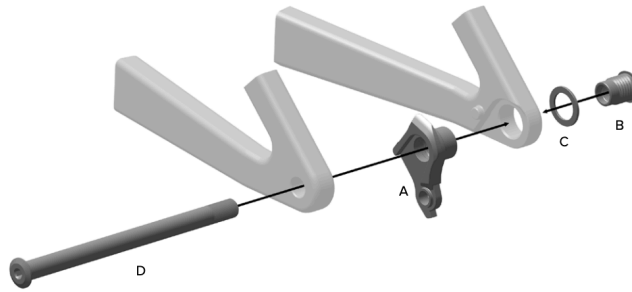


3. Remove the axle (highlighted in blue) using a 6mm HEX key on the left side of the bike.
4. Detach the chain from the cassette and drop the wheel straight down to ensure the disc rotor slides out of the brake calipers.

4.3.2.2 Rear wheel installation

1. To reinstall the rear wheel, you will need to repeat the above steps in reverse. Carefully insert the wheel back into the disc rotor, and ensure the chain is routed properly on cassette.
2. Gently slide the axle back into place and tighten to 12 Nm. Note: if your axle threads have become dry, we recommend greasing the threads to prevent corrosion or the axle seizing in the frame. Lithium based bicycle grease is recommended.
3. Unlock the derailleur by pulling it forward so that the lock mechanism opens, and the derailleur tensions the chain.
4. Always run through each gear and ensure the drivetrain is shifting well after re-installing the rear wheel.

4.3.2.3 UDH Hanger Information



The UDH rear derailleur hanger (A) and UDH bolt (B) are used to secure the derailleur. UDH frame washers (C) are frame specific. Ensure the washer is compatible prior to replacing. The axle is UDH compatible and has a M12x1.0 thread pitch and thread length measuring 12.7mm.



CAUTION

Crash caused by loose axle

A faulty or incorrectly installed axle may cause a crash if the axle comes out. This could also damage the rear swing arm or other components. It is recommended to check your axles every few rides or if it has been over a few weeks since your last ride.

5 Operation/Use

5.1 How to use the product

5.1.1 Pre-ride safety check

To ensure rider safety and to prevent damage to the bike, it is important to ensure your bike is in good working order prior to each ride. Complete the following checklist to prevent injury or damage:

Component	Action	Frequency
Bolts	Visually examine each bolt on the RX to ensure they are not backing out.	Every ride
	Re-torque all bolts	After the first few rides initially, and then every 3 months or post-crash
Brakes	Squeeze brakes and attempt to roll the RX. The bike should be unable to roll while the brakes are engaged.	Every ride
Drivetrain	Cycle through all gears and ensure they are shifting smoothly.	Every 2-3 rides
Wheels	Check that the wheels are securely attached.	Every ride
Rims / spokes	Check the rims for wear. Ensure all spokes are tight and properly installed.	Every few rides
Tires	Check the tires for wear. Pay close attention to the side walls.	Every few rides
Steering assembly	Check chain tension and ensure its set to the recommended tension.	Every few rides
	Check stem bolts and ensure stem and cranks are aligned.	
	Check cranks, grips, shifter and mounts to ensure they are mounted correctly.	
Cockpit	Check all 3D printed component integrity. Check for hairline fractures,	Every few rides

	loose bolts or inserts, and securement of KIOX and accessory mount.	
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5.1.2 Operational environment

Please refer to the Bosch manuals on our website for the specified operating temperatures of our electrical systems.

Notice

Heat or direct sunlight can cause the tire pressure to increase above the permitted maximum pressure. The can damage and destroy the tires.

- Never park your Bowhead RX in the sun.
- On hot days, regularly check the tire pressure and adjust as necessary.

When riding downhill, high speeds may be reached.

- The Bowhead RX is only designed to reach 32km/hour (Class 1) for short periods. The tires can fail is exposed to a continuous load.
- Decelerate the RX using your brakes if you reach speeds greater than 32 KM/h or 20 mph.

5.1.3 Tips for greater range

How far can your Bowhead RX actually travel? There is no simple answer to this question as range depends on many influencing factors. A single battery charge may last fewer than 20 kms but more than 80 is also possible.

Cadence

Pedaling frequencies higher than 50 revolutions per minute optimize drive unit efficiency. However, very slow pedaling uses up a great deal of energy.

Weight

Weight should be minimized. The total weight of the RX and cargo should not be unnecessarily high.

Terrain

Terrain plays a large role in the expected range from your Bowhead RX. If you are planning a large ride with bumpy trails and significant elevation, then you can expect your average range to decrease.

Gear shift

Shifting gears correctly also makes your RX more efficient. It is best to set off and ride up hills using a lower gear and switch up a gear depending on the speed and terrain. It is recommended to shift at the top of your rotation, where there is the least amount of power going into your cranks. Avoid shifter under load as this can damage the gears.

Battery & temperature

Battery performance is reduced as the temperature drops since this increase's electrical resistance. As a result, you should expect the range to be shorter than normal on colder days and in the winter.

5.1.4 Starting/Stopping the product's operation



1. You can turn on the Bowhead RX by pressing the power button on the KIOX computer.
2. Use the UP and DOWN arrows on the remote to change the assist levels.
3. Use the LEFT and RIGHT arrows to view the various data screens.

6 Maintenance and cleaning



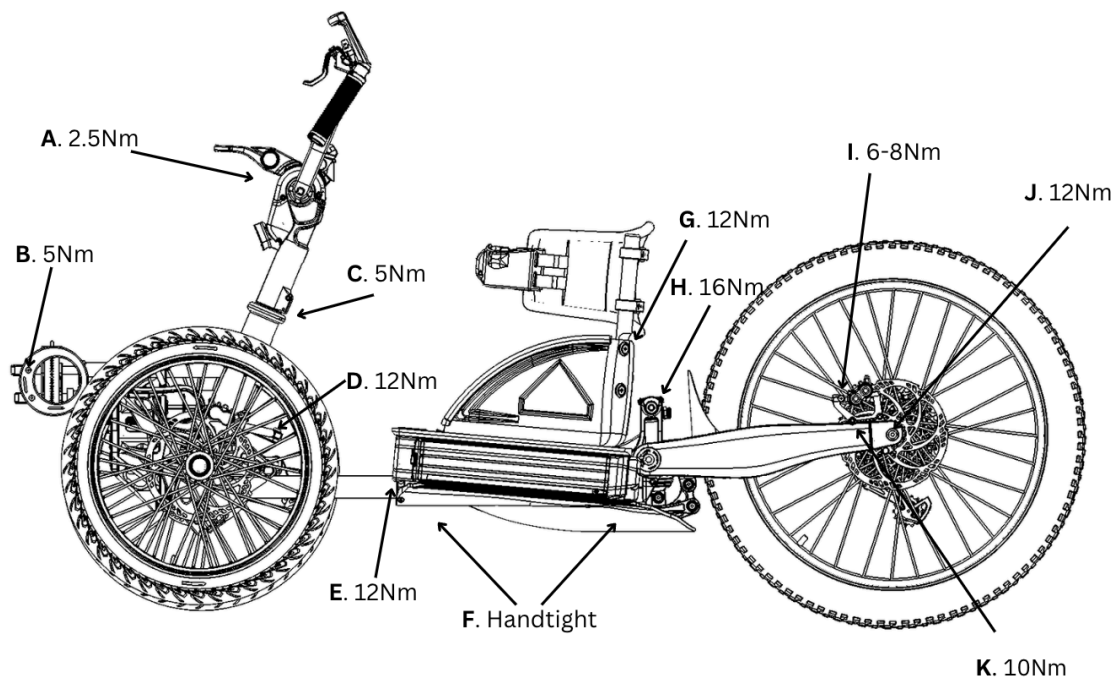
Crash and falling caused by unintentional activation

There is a risk of injury if the drive system is activated unintentionally.

Remove the battery before maintenance.

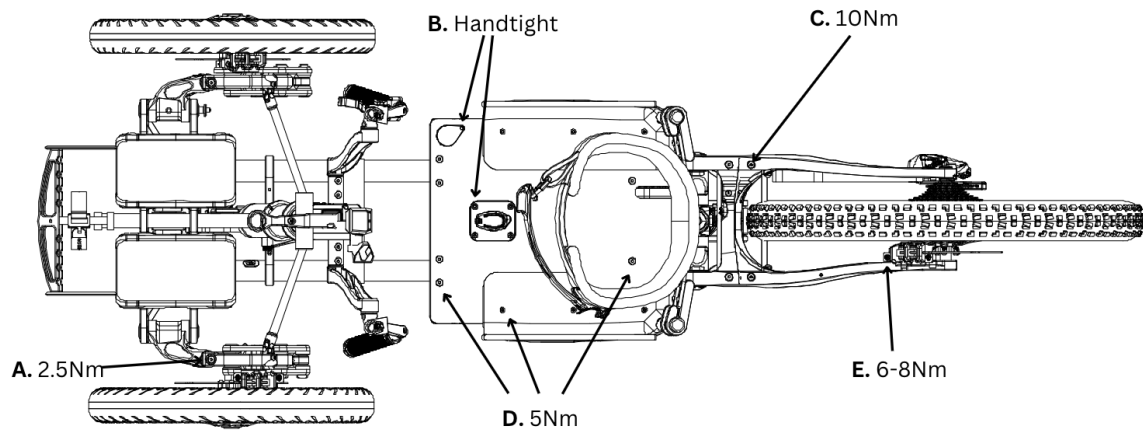
6.1 How to maintain the product.

6.1.1 Torque specifications for the Bowhead RX



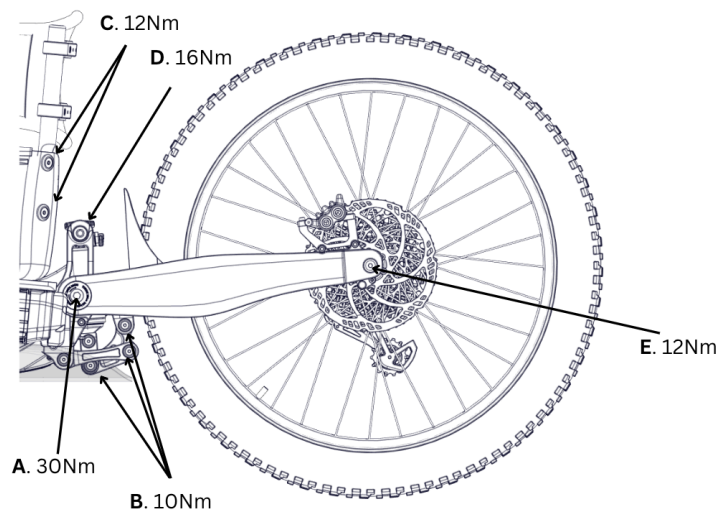
- A) 3D printed top-cap assembly bolts
- B) Footrest plate bolts
- C) Stem clamping and collar bolts
- D) Pitman arm / steering coupling bolts
- E) Frame clamps (all 4 bolts required to adjust seat forward and back are 12Nm)
- F) Skid plate bolts
- G) Side guard to seat post bolts
- H) Suspension trunnion bolts
- I) Brake caliper bolts
- J) Axle bolt
- K) Caliper adapter bolts

6.1.1.1 Top View



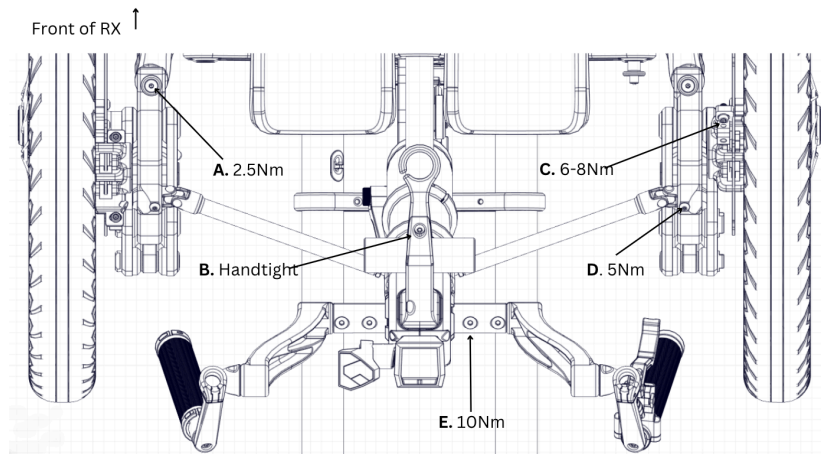
- A. Steering pin bolts (suspension arm and steering connection)
- B. Keyhole cover and charge port insert
- C. Rear swing arm securing bolts
- D. Wooden seat base bolts
- E. Caliper mounting bolts

6.1.1.2 Rear end



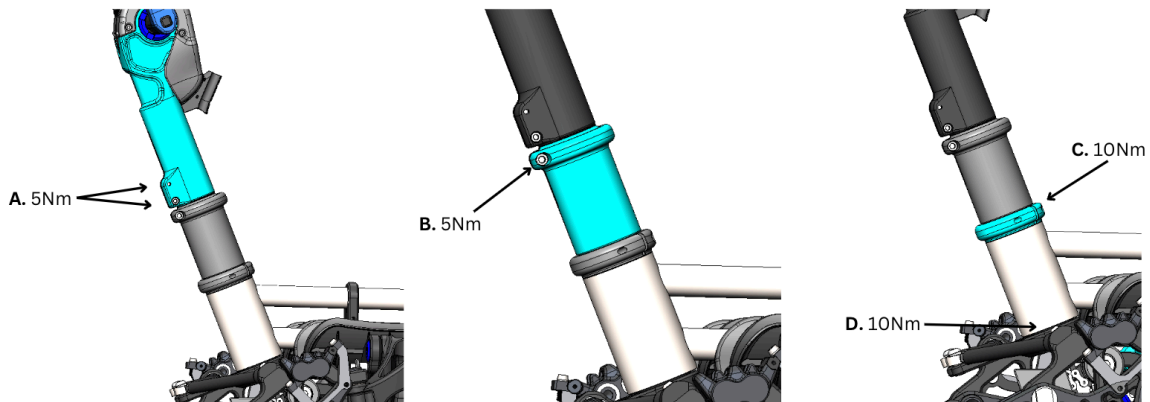
- A. Rear swing arm pivot bolt
- B. Suspension rocker pivot bolts
- C. Seat post to sideguard bolts
- D. Rear trunnion suspension mount
- E. Rear axle bolt

6.1.1.3 Front end



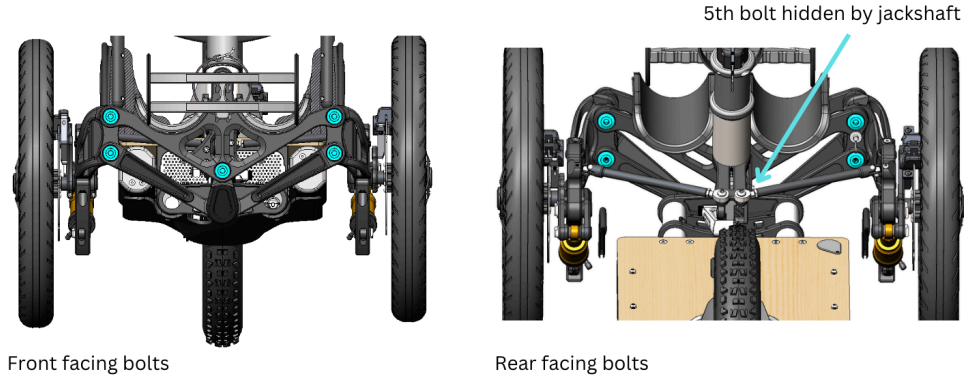
- A. Suspension arm mount bolt. Over torquing this bolt will cause difficulties steering. Please adjust these occasionally as bushings wear.
- B. 3D printed parts. Do not over torque bolts installed into plastic components.
- C. Brake caliper mount bolts.
- D. Steering coupling insert bolt.
- E. Crank arm fasteners.

6.1.1.4 Steering column



- A) Stem clamping bolts
- B) Upper sleeve clamping bolt. This torque may be insufficient on some earlier RX models. A max torque of 10Nm is allowable. For more info, please contact Bowhead.
- C) Lower sleeve clamping bolt
- D) Pitman arm / steering connection

6.1.1.5 Articulation



The torque setting on the Articulation bolts is crucial to the operation and performance of the RX bicycle. These bolts are first primed with Loctite SF 7649 Primer and Loctite 242 (blue) and then tightened to a torque of 45Nm.

- This setting is high and will require both heat and leverage to loosen and service this area.
- The bolts **MUST** be prepped and tightened using the same method above, post servicing, to ensure longevity and safety of the product.
- You will likely require assistance from a strong friend to service this area as it requires significant effort/force to remove these bolts.

6.1.2 Removing the 3D Printed top cap assembly

You may have to remove the top cap assembly to access the freewheel, vertical chain, or to replace the 3D printed parts. In order to do so, follow the steps below:



1. Remove bolts (highlighted in blue) with the appropriate Hex key and Phillips driver for the lowest bolt.
2. Gently separate the left and right sides of the assembly.

3. The accessories mount, KIOX mount, and brake cable guides are press fit into each half. Gently remove these if needed.
4. Replace damaged components as necessary.

6.1.3 Installing the 3D Printed top cap assembly

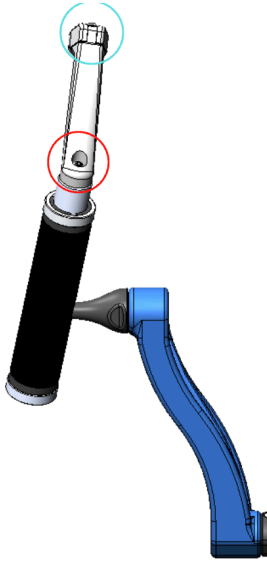
To reinstall the top cap assembly, complete the following steps.



1. Press the accessories mount, KIOX mount, and brake cable guides into one side of the assembly.
2. Gently slide the assembly back over the freewheel and crank arms.
3. Once all components are carefully aligned, press the two halves together.
4. Once the 3D printed top cap assembly is in place, reinstall the bolts and torque to 2.5Nm.

6.1.4 Replacing the brake cable guide arms

To replace the brake cable guide arms, complete the following steps



Removal:

1. Remove the bolt circled in red.
2. Note: use caution when removing bolt circled in red. Do not fully remove from guide not to avoid losing part.
3. Remove the bolt circled in blue.
4. Dispose of damaged components.

Installation:

1. Attach the new arm to the handle and reinstall bolt circled in red.
2. Fit the brake hose into the guide end, and reinstall the bolt circled in blue.

6.1.5 Removing the grip from your pedal

You may want to replace your grips over time and use as these are a wearable component. You may also wish to switch grips for improved ergonomics and efficiency in cranking. Please follow the steps below to remove grips:



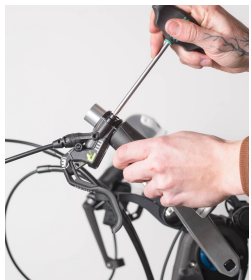
1.



2.



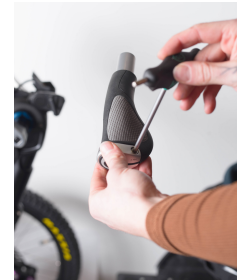
3.



4.



5.



6.

1. Prepare the tools required (adjustable wrench and T25 Torx).
2. Remove the bolt securing the brake cable guide arm.
3. Remove the brake cable guide arm.
4. Remove the brake lever.
5. Use a soft cloth and adjustable flat edge pliers to hold onto the pedal axle as shown on the left. Grab the pedal with your other hand and twist the handle counterclockwise to loosen. Spin the pedal until it comes free of the set screw.
6. Loosen the grip locking screws and pull the grip off the pedal.

6.1.6 Installing new grips



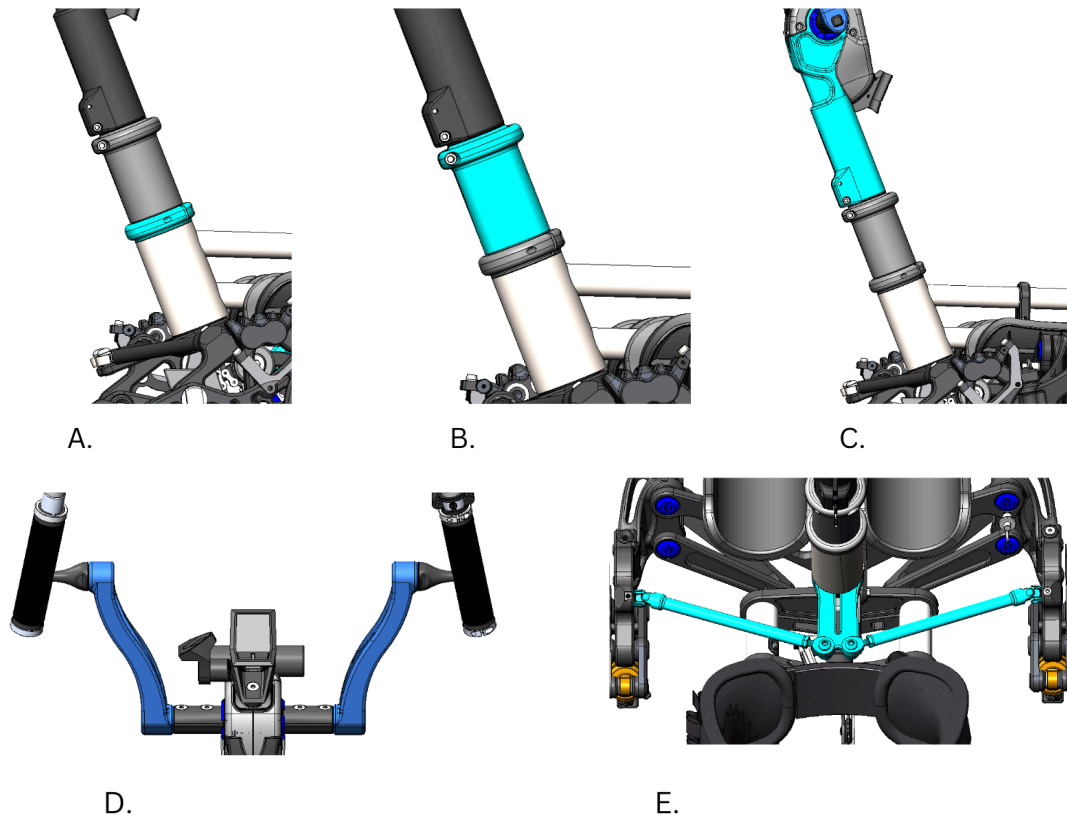
To reinstall the grips, complete the following steps.

1. Slide the grip over the pedal, taking care to align the hole in the grip with the set screw location.
2. Tighten the grip locking screws.
3. Re-apply Red Loctite on set screw and carefully spin the pedal back onto the pedal axle. Please note that your pedals and threads are at an angle. Do not cross thread pedal.
4. Once the pedal is hand tight, use a 10Nm torque wrench as shown in the image on the left, and twist the pedal until you hear the wrench click.
5. Reinstall the brake lever. Torque 5-6Nm.
6. Reinstall brake cable guide arm. Hand tight such that the guide cannot rotate.

NOTE: New grips can be ordered directly from Bowhead. If you are modifying your own grips for install, be sure to align the holes properly.

6.1.7 Steering column structure

The steering column on your RX features components that serve multiple functions.



You can see the following components highlighted in the diagram: Sleeve-Bottom (A), Sleeve-Top (B), Stem (C), Spindle-Crank (D), Pitman Arm and Steering Knuckles (E).

The Sleeve-Bottom (A) is used to set the correct headset compression during assembly and maintenance. Headset compression is a critical element to the performance and feel of your RX.

- Too tight: Will crush or bind the bearings resulting in a bike that is unable or difficult to steer.
- Too loose: Could cause damage to bearings and will result in inefficient power distribution. Poor feel of steering and play in steering motion.

The Sleeve-Top (B) is used to set the chain tension of your top chain loop. This can only be done with the steering assembly connected to the bike as the chain loops through the jackshaft assembly as well. Please see instructions on page 47 for how to set the correct top chain tension.

- Too tight: Will make cranking difficult and stretch/wear the chain more quickly.
- Too loose: Will result in noise in the steering column as the chain hits the metal inside. Could cause chain damage or break.

The Stem (C) controls the orientation of the steering assembly and is connected to the crank arms via the Spindle-Crank (D).

The Spindle-Crank (D) is fastened through the Stem and holds the Freewheel and both crank arms. The width of the crank arms is adjustable via the Spindle-Crank. A special tool is required to service the Spindle-crank and the components it houses, please contact Bowhead for support when servicing this area.

The Pitman Arm (E) connects the steering column to the front wheels to allow steering of the bike. It is secured against a stainless retaining ring and is the bottom component in the steering assembly stack.

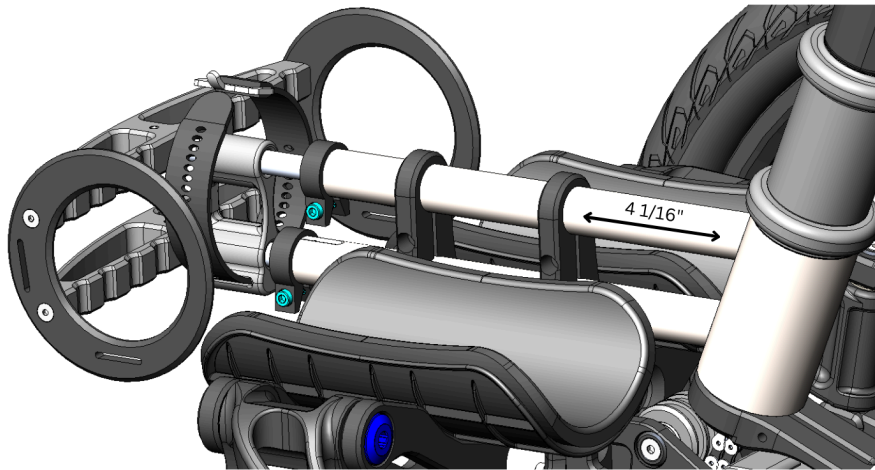
6.1.8 Geometry of steering

The performance of your RX is significantly impacted by the toe-in or toe-out of the bike.

1. Toe-in refers to the front wheels tilting towards the centerline of the bike, while
2. Toe-out refers to the front wheels tilting away from the centerline.

Both conditions will accelerate tire wear and may be slightly adjusted based on rider preference.

The toe is set by 2 distinct measurements at Bowhead.



1. The steering column must be set $4\frac{1}{16}^{\text{th}}$ inches from the rear articulation frame as shown in the image above.
2. The rod ends are then adjusted and locked in place via a hex nut. Each rod end may be rotated half a turn inwards or outwards to achieve the desired toe. By rotating the rod ends half a turn each, the toe is adjusted by $\frac{1}{8}^{\circ}$

6.1.9 Toe-in / toe -out

6.1.9.1 Effects of Toe-in:

1. Toe-in can cause increases in slip angle of the front tires which helps to increase the grip between tire and road.
2. The increased grip due to the toe-in angle resists the bike motion and reduces the acceleration of the bike.
3. The top speed of the bike also decreases with an increase in the toe-in angle.
4. In this case, the driver must put more effort into steering.
5. A minor toe-in angle is more stable on high-speed corners.
6. It helps to overcome the oversteer effects.
7. The increased grip due to toe-in causes the tires to heat up faster.
8. The incorrectly set toe-in angle increases the wear rate of the tire.

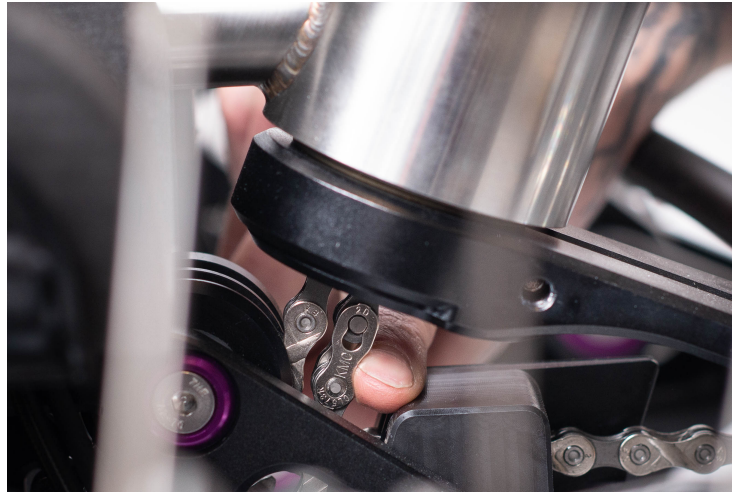
6.1.9.2 Effects of Toe-out:

1. The toe-out also increases the slip angle of the tire which increases the grip between the tire and the road.
2. The increased toe-out angle increases resistance to the motion of the bike. Thus, the rider must put more effort to push/pull the front wheels, lowering the acceleration of the bike.
3. The peak speed of the bike decreases with an increase in toe-out angle.
4. The toe-out angle increases the sensitivity of the steering; thus, it becomes easy to turn the bike faster with minimum effort. Thus, the toe-out helps to overcome the understeer effects.
5. Bikes with excessive toe-out are unstable on a high-speed corner.
6. The increase in the slip angle causes the tires to heat up faster and increases the rate of wear.

6.1.10 How to measure the Toe on your bike

1. Get a tape measure and your bike.
2. Select a location on the front rim to measure to, we recommend choosing the valve stem location as this is easy to identify.
3. Measure between the same 2 points on the front wheels twice. One measurement taken in front of the Articulation, and the second measurement taken from behind the Articulation.
4. The difference in your measurement is equal to your toe.
5. No difference means your front wheels are perfectly parallel.

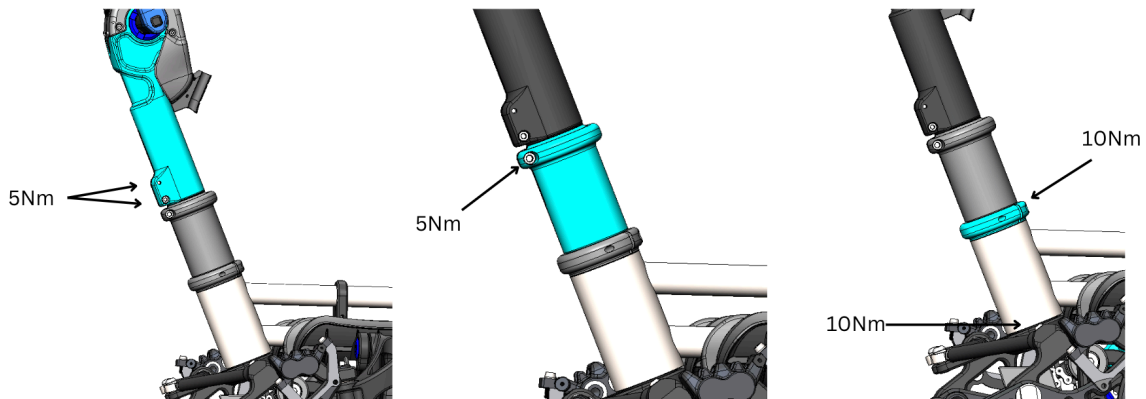
6.1.11 Adjusting the top chain tension

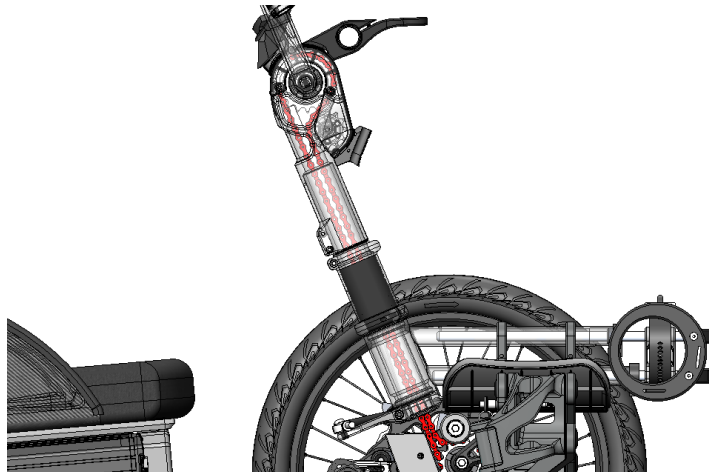


To adjust or set the top chain tension, complete the following steps.

1. First, you must identify where the chain should be set. Is the current tension too loose or too tight? To check this, use your index finger and push on the rear chain loop as shown above.
2. The chain should be able to deflect until it just touches the other section of chain. It should not be difficult to make the chain touch, and there should be no slack in the chain once they are touching.
3. To tighten chain tension: Loosen the 2x stem bolts and 1x upper steering collar bolt.
4. Twist the upper steering collar clockwise until tension is set by finger feel. **NOTE:** It does not take very much rotation to affect chain tension, use caution and adjust slowly.
5. Tighten and torque bolts complying with the torques noted below.
6. To loosen chain tension: follow steps 3-5 above; but twist the upper steering collar counterclockwise this time.

For more detail on the steering column and its components, please see page 46.





6.1.12 Lubricating the chains

Ensuring all three chains are lubricated is important for smooth shifting and helps prevent corrosion and drivetrain wear. In order to lubricate your chains, follow the steps outlined below:

1. Use a dry cloth to clean the chain.
2. Apply chain lube to all three chains.
3. Use a clean cloth and rotate the chains in order to remove excess lubricant.

6.1.13 Replacing the chains



The Bowhead RX has three chains. As chains are a wearable component, they will likely need to be replaced during the life of the bike. In order to do so, please follow the steps below. Note: it is important to connect the new chain PRIOR to removing the old chain.

1. First, confirm that the chain needs replacing. This can be done by using a chain checker tool or having your chains checked at your local bike shop.
2. If it is time to replace the chain, purchase the appropriate chain, such as 8-speed or 12-speed.

3. Place a block underneath the chain tensioner on the center chain in order to remove tension.
4. Find the Quick Link and disconnect the chain.
5. Connect the ends of the old chain and the new chain together.
6. Pull the old chain through until the new chain has been routed through the system.
7. Disconnect the old chain and link the new chain to itself.

Note: This method can be used on all three chains on the Bowhead RX. Please contact Bowhead Customer Service for more info or if you require additional support.

6.1.14 Cleaning checklist

Cleaning Checklist

Task	Frequency
Clean the cranks and grips	After each ride
Clean the shocks	After each ride
Clean the batteries	Once a month
Basic cleaning and preservation of all components	At least every six months
Clean the charger	At least every six months
Clean the seat assembly and harness	Once a month or after a wet ride
Clean under skid plate	At least every six months
Clean chain & drive train	After every ride if wet or muddy
Clean frame	After each ride

NOTE: Failure to keep bike clean will lead to increased service and maintenance as parts may wear faster.

6.1.15 Planned maintenance

Maintenance tasks shall be done according to the following plan:

Task	Frequency
Replacing the battery	When needed
Lubricating the bearings	Once a week
Check tire for wear	Once a week
Check rims for wear	Once a week

Check tire pressure	Once a week
Check brakes for wear	Every 2-3 weeks or after a long ride
Check electrical cables	Once a month
Check chain tensions	Once a month
Check spoke tension	Every 2 months or post-crash
Check gear shifting settings	Every three months or when shifting is off
Check shocks for wear and ensure functional	Every 3 months
Check brake pads	Once a month
Check disc rotors	Every 4-6 months

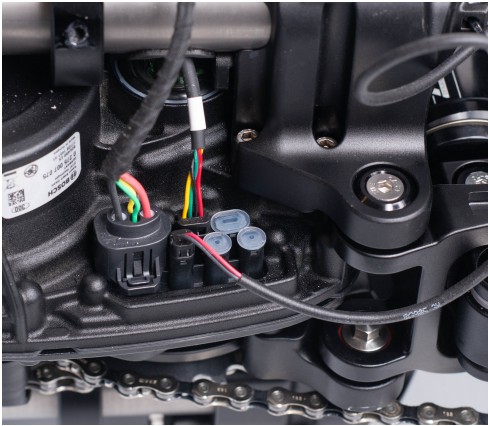
Table 5 Planned maintenance for the Bowhead RX

6.2 Electrical components

Cleaning the Plugs and motor connections



Do not remove plugs when your RX is below room temperature. The plastic becomes brittle and will break. Use extreme care as these plugs are small and delicate.



Required tools and cleaning agents:

- Small flat head screwdriver or small pick
- Soft cloth: microfiber or otherwise
- Small brush

Cleaning the plug/connection

1. Remove the skid plate.
2. Use a small pick to gently depress the locking latch on each plug.
3. While keeping the latch depressed, slowly and gently wiggle the plug straight out.
4. Use cloth and brush to gently wipe away debris.
5. Plug all connections back with care.

6.3 How to clean the product

Required tools and cleaning agents:

- Cloth
- Brush
- Water
- Dish liquid or bike-wash
- Bucket

Cleaning the frame and wheels

1. Remove all excess dirt and mud
2. Apply soap and water
3. Scrub with a soft, non-abrasive brush
4. Rinse well and ensure all soap has been removed

Notice

Water may enter the inside of the bearings if you use a pressure washer. This dilutes the lubricant inside, the friction increases and, as a result, the bearings are permanently damaged in the long term. Do not use a pressure washer on your Bowhead RX.

Cleaning the drive elements

1. Spray the cassette, the chain wheels and the front derailleur with a degreasing agent.
2. Clean coarse dirt with a brush after soaking for a short time.
3. Wash down all parts with dish-washing detergent and a toothbrush.
4. Service the drive elements after cleaning.

Cleaning the Electronic Components

1. Remove components from the RX (including KIOX, batteries, and remote)
2. Clean electrical components by wiping them down with a dry cloth or brush
3. Use extreme caution when cleaning and handling electrical components

7. Troubleshooting and repair

7.1 How to Identify and solve problems

WARNING: Once a problem is identified, do not ride your Bowhead bike until the necessary steps have been taken and has been repaired to factory standards.

NOTICE: Contact Bowhead for additional support on troubleshooting errors and solutions. If any issues persist beyond the below solutions contact Bowhead immediately.

Error	Cause	Solution
Product does not start, or display does not show up	Battery not installed or not charged.	<i>Check that battery is installed correctly according to instructions on page 18. Check that the LEDs on the battery level indicator light up. All 5 bars should be lit for a fully charged battery.</i>
	Battery contacts/connections are dirty.	<i>Remove battery and clean all contacts with a soft cloth. Reinstall the battery.</i>
	Display not connected.	<i>Remove KIOX from the mount, clean all contacts with a soft cloth, and reinstall on bike.</i>
	Wiring not connected.	<i>Remove skid plate and ensure 3 distinct cables are plugged into the motor.</i>
Speed not displaying on KIOX	Bosch speedo cable disconnected from motor.	<i>Remove skid plate to clearly see motor connections. Check speedo connector and ensure this is plugged into the motor. Info on page 32.</i>
Charging port not operating	Batteries are installed incorrectly.	<i>Check which side of the bike the batteries are installed</i>
	Damage to wiring/cables.	<i>Check seat wiring for any damage or disconnected plugs. Refer to wiring</i>

		<i>diagram on page 32, and contact Bowhead if issue persists.</i>
Chain rub under seat	Chain interferes with skid plate in low gears	<i>Adjust your shock sag. This should be set with the rider in the bike at 25% sag. Also ensure all seat wiring as per image 32 is free and clear of chain motion.</i>
Cranks do not freewheel backwards	Freewheel is broken	<i>Contact Bowhead for remedy.</i>
Chain noise in steering column	Chain tension too loose.	<i>Please refer to the steps outlined on page 50 for instructions on adjusting top chain tension.</i>
Unable to remove or install battery	Dirt in the keyhole, can't engage key for lock.	<i>Clean key holes. Use vacuum or air to blow debris from the socket. Try key again.</i>
	Battery jammed.	<i>Contact bowhead for remedy.</i>
Shifter not functioning (i.e.: not changing gears)	Blue tooth connection failed.	<i>Press & hold the button on the derailleur until flashing green. Then press and hold the button on the thumb shifter until the light flashes quicker, release. You are now connected.</i>
	Battery not charged.	<i>Disconnect battery from bike and plug in to USB to charge. Wait for light to turn Blue and reinstall in bike.</i>
Drivetrain skipping gears, not operating smoothly.	Chain is dirty.	<i>Clean chain.</i>
	Chain is old & worn out.	<i>Measure chain stretch, Replace chain.</i>
	Derailleur hanger is bent.	<i>Take bike to reputable mechanic to service. Please</i>

		<i>contact Bowhead if you wish to perform this service yourself as it requires a specific tool.</i>
Reduced range	Low tire pressure	<i>Inflate tires to recommended PSI.</i>
	Low battery	<i>Charge battery.</i>
	Brakes rubbing	<i>Adjust the brakes according to the instructions on page 32</i>

Table 6 Troubleshoot the Bowhead RX

8. Safety warnings and instructions



OPERATING WITHOUT INSTRUCTION

Operating this bike without proper instruction increases the risk of an accident. The operator must understand how to operate the bike properly in different situations and on different types of terrain. All operators must read and understand the owner's manual and all warning and instruction labels before operating the bike.

Requirements for the Rider

If there are no legal requirements for riders of electrically power-assisted cycles, we recommend that the rider should be a minimum 15 years of age and have experience with bicycles.

EQUIPMENT MODIFICATIONS

Your Bowhead RX is designed to provide safe operation when used as directed. Modifications to your bike may negatively impact stability and safety. Failure of critical machine components may result from operation with any modifications. This vehicle may become less stable at speeds higher than those for which it is designed. Loss of control may occur at higher speeds. Do not install any non-Bowhead approved accessories. Any modifications or installation of non-Bowhead-approved accessories could create a substantial safety hazard and increase the risk of bodily injury. The Bowhead limited warranty on your bike will be terminated if any non-Bowhead approved equipment and/or modifications have been added to the bike. Use only Bowhead-approved accessories & components and familiarize yourself with their function and effect on the RX.

Protection for vulnerable groups

You must keep batteries and charger away from children, animals, and people lacking in experience and knowledge.

Personal protective equipment

We recommend that you wear a suitable cycling helmet. We also recommend that you wear protection and typical, close-fitting clothing for bicycles.

Brake fluid

The brake system must be repaired immediately if brake fluid leaks out. Dispose of leaking brake fluid in an environmentally responsible way in accordance with statutory regulations.

8.1 Personal safety

- Do not leave children unattended with your Bowhead bike or any of the electrical components.
- Riders under the age of 18 should not ride unattended.

8.2 Personal safety

- Riders must wear a bicycle helmet
- Protective gear such as gloves, elbow pads, and bike clothing is recommended.

8.3 Work area safety

- Maintenance on the bike should be done in a controlled environment without hazardous materials or equipment.
- Maintenance completed outside should be done in a safe area.

8.4 Electrical Safety



Risk of fire and explosion due to incorrect charger

Batteries which are recharged with an unsuitable charger may become damaged internally. This may result in fire or explosion.

- Only ever use the battery with the supplied charger. For international orders where chargers and batteries must be sourced locally, only use products recommended by Bowhead.
- Mark the charger clearly to prevent mix-ups – with the Bowhead Universal Bike Code (UBC) for example.

Only trained specialist staff and Bowhead builders may perform initial commissioning. Bowhead bikes will be delivered fully assembled, unless shipping to a trained technician who is capable of safe assembly.

8.5 Checking the battery



Risk of fire and explosion due to faulty battery

The safety electronics may fail if the battery damaged or faulty. The residual voltage can cause a short circuit. The battery may self-ignite and explode.

- Never charge a faulty battery.
- Do not leave battery unattended while charging.
- Keep batteries away from liquid, especially while charging.
- Remove batteries with external damage from service immediately and never charge them.
- Only operate the battery and accessories if they are in perfect condition.
- Only use batteries which are approved for use on your Bowhead.
- Do not use a battery with connecting cable or defective contacts.
- If the battery becomes deformed or begins to smoke, keep at a safe distance, disconnect the power supply at the socket, and notify the fire service immediately.
- Never extinguish a damaged battery with water or allow it to encounter water.
- If a battery is dropped or struck but shows no signs of external damage, remove it from service and observe it for at least 24 hours.
- Faulty batteries are hazardous goods. Dispose of faulty batteries properly and as quickly as possible.
- Store in a dry place until disposal. Never store in the vicinity of flammable substances.
- Never open or repair the battery.
- Charge the battery before each use. Only use the charger included in the scope of delivery.
- Avoid wide temperate fluctuations.



Chemical burns to the skin and eyes caused by faulty battery

Liquids and vapors may leak from a from a damaged or faulty battery. Excessive temperatures can also cause liquid to leak from the battery and the battery will become damaged. Such liquids can irritate the airways and cause burns.

- Avoid any contact with leaked liquids: Immediately consult a doctor if liquid encounters eyes or causes discomfort.
- If liquid encounters skin, rinse off immediately with water.
- Protect the batter against heat over 60 °C. e.g., against permanent direct sunlight.

Risk of fire and explosion due to short circuit

Small metal objects may jumper the electrical connections of the battery. The battery may self-ignite and explode.

- Keep paper clips, screws, coins, keys, and other small parts away and do not insert them into the battery.

Risk of fire and explosion due to penetration by water

The battery is only protected from simple spray water. Penetration by water can cause a short circuit. The battery may self-ignite and explode.

- Never immerse the battery in water.
- Never clean the battery with a pressure washer.

If there is reason to believe that water may have entered the battery, the battery must be removed from service.

**Risk of fire and explosion due to faulty battery**

The safety electronics on a damaged or faulty battery may fail. The residual voltage can cause a short circuit. The battery may self-ignite and explode.

Remove batteries with external damage from service immediately and never charge them.

Only operate the battery and accessories if they are in perfect condition.

Only use batteries which are approved for use on your Bowhead bike.

Do not use the battery with defective connecting cables or defective contacts.

Use the battery with BOSCH Systems only. This is the only way that the battery will be protected from dangerous overloading.

If the battery becomes deformed or begins to smoke, keep at a safe distance, disconnect the power supply at the socket, and notify the fire service immediately.

Never extinguish a damaged battery with water or allow it to encounter water.

If a battery is dropped or struck but shows no signs of external damage, remove it from service and observe it for at least 24 hours.

Faulty batteries are hazardous goods. Dispose of faulty batteries properly and as quickly as possible.

Store in a dry place until disposal. Never store in the vicinity of flammable substances.

Never open or repair the battery.

Charge the battery before use. Only use the charger provided with your bike or purchased through Bosch.



Electric shock in case of damage

Damaged chargers, cables and plug connectors increase the risk of electric shock.

Check the charger, cable and plug connector before each use. Never use a damaged charger.

Risk of fire and explosion due to short circuit

Small metal objects may jumper the electrical connections of the battery. The battery may self-ignite and explode.

Keep paper clips, screws, coins, keys and other small parts away and do not insert them into the battery.

Risk of fire and explosion due to incorrect charger

Batteries which are recharged with an unsuitable charger may become damaged internally. This may result in fire or an explosion.

Only ever use the battery with the supplied charger.

Mark the supplied charger clearly to prevent mix-ups.

Risk of fire and explosion due to penetration by water

The battery is only protected from simple spray water. Penetration by water can cause a short circuit. The battery may self-ignite and explode.

Never immerse the battery in water.

If there is reason to believe that water may have entered the battery, the battery must be removed from service.

**Risk of fire and explosion due to high temperatures**

Excessively high temperatures will damage the battery. The battery may self-ignite and explode.

Protect the battery against heat.

Never expose the battery to sustained direct sunlight.

Fire caused by overheated charger

The charger heats up when charging the battery. In case of insufficient cooling, this can result in fire or burns to the hands.

Never use the charger on a highly flammable surface (e.g., paper, carpet etc.).

Never cover the charger during the charging process.

Never leave the battery unattended during charging.

Electric shock caused by penetration by water

If water penetrates the charger, there is a risk of electric shock.

Never charge the battery outdoors.

**Chemical burns to the skin and eyes caused by faulty battery**

Liquids and vapours may leak from damaged or faulty batteries. They can irritate the airways and cause burns.

Avoid contact with leaked liquids.

Ventilate with fresh air and consult a doctor if you suffer any pain or discomfort.

Immediately consult a doctor in case of contact with the eyes or any discomfort.

In case of contact with the skin, rinse off immediately with water.

Ventilate the room well

Hazard for the environment due to leaking brake fluid

The brake system contains a toxic, environmentally harmful brake fluid. Such fluids will contaminate if they enter the sewers or groundwater.

The brake system must be repaired immediately if brake fluid leaks out. Contact your Bulls Dealer about repair.

Dispose of leaking brake fluid in an environmentally responsible way in accordance with statutory regulations.

Environmental hazard posed by oil and lubricants from rear frame damper

The rear frame damper contains toxic and environmentally harmful oils and lubricants. Such fluids will contaminate if they enter the sewers or groundwater.

Dispose of oils and lubricants which have leaked from the rear frame damper in an environmentally responsible way in accordance with statutory regulations. Ask your Bowhead service rep for more info if required.



8.6 Crash caused by incorrectly adjusted torques

If a screw is fastened too tightly, it may break. If a screw is not fastened enough, it may loosen. This will cause a crash with injuries.

- Always observe the indicated torques on the screw or in the *operating instructions*.

Only a correctly adjusted Bowhead will guarantee you the desired ride comfort and health-promoting activity. Therefore, adjust the seat position, grips, crank width, crank height, and suspension to your body and your preferred riding style before the first ride.



8.1.16 Injuries and death caused by other road users

Other road users, trucks, cars or pedestrians often underestimate the speed of cyclists. Likewise, other road users frequently do not see cyclists. This may cause a crash with serious injuries and even death.

- Wear a cycling helmet and high-visibility, reflective clothing if riding on the road.
- Always take a defensive approach to riding.
- Avoid the blind spots of vehicles turning off and reduce your speed as a precaution when other roads users turn right.

8.7 Injuries and death caused by riding incorrectly

Crashes are possible when riding on terrain that is above the rider's skill level or that they are unfamiliar with.

- If you are riding in a new area or it has been some time since the last time you rode, please start off on entry level terrain and get accustomed to braking, shifting, steering, and articulating.
- Practice hard braking on a regular basis.
- We recommend taking rider safety courses or adaptive mountain bike skills courses.



8.8 Crash caused by loose clothing

Shoelaces, scarves, and other loose items may become entangles in the cranks or spokes on the wheels, cranks, and drive train. This may cause injury or a crash. Tight fitting clothing and sturdy footwear are recommended.

9. RECYCLING and DISPOSAL

9.1 How to dispose of components

To dispose of the batteries:

1. Never dismantle the charger, batteries, or other components for disposal.
2. Refer to Bosch manuals found on our website for battery disposal information.

9.1.11 Disposal of electronic components

To dispose electronic components:

1. Comply with your local garbage, recycling, and waste disposal guidelines.
2. Always dispose of components in an environmentally responsible way.

9.1.12 Disposal of packaging waste

To dispose of packaging waste:

1. Recycle all cardboard if aligned with your local recycling guidelines.
2. Place all non-recyclable packaging in the garbage

10. Declaration of Conformity

EC Declaration of Conformity 2022 CE

Manufacturer: Bowhead Design Corporation
6919 32nd Avenue NW
Unit B103
Calgary, AB T3B 0K6
Canada
+1 517 889 2424

Hereby declares that the following products:

Product description: Bosch Performance Line CX – motor, batteries, charger, Kiox
Model description: Bowhead RX Adventure-E bike

Product description: SRAM Eagle AXS - wireless drivetrain system, including derailleur, shifter, and cassette.
Model description: Bowhead RX Adventure-E bike

Product description: Rohloff SpeedHub 500/14 – Cycle transmission.
Model description: Bowhead RX Adventure-E bike

Product description: Gustav Magenwirth GMBH & Co. KG - Magura brakes
Shimano Inc. - Brakes
Model description: Bowhead RX Adventure-E bike

Product description: SRAM - RockShox shock absorbers
Fox Factory, Inc. - Fox shock absorbers
Model description: Bowhead RX Adventure-E bike

Year of manufacture: 2021/2022

as listed stand-alone, and in aggregate and integrated into the Bowhead RX Adventure-E bike, satisfy all the relevant requirements of the EC Declarations (2006/42/EC), and any and all EN standards used to determine such conformity.

The machine also satisfies all requirements of the Electromagnetic Compatibility Directives (2014/35/EU, 2014/30/EU), of IT Directives (2011/65/EU), of Radio Equipment (2014/53/EU), and of the Machinery Directives (2006/42/EU), including motor wattage rating at less than or equal to 250W and a top assisted speed of 25kph.

Respectfully,

Dean E. Miller
President and CEO
January 1, 2022
Bowhead Design Corporation
6919 32nd Avenue, Unit B103, Calgary, AB T3B 0K6 Canada

